

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	(heart and retractor and incision and stabilizing and tissue and aperture and suction and coupling and shaft and flexible and wire and arm and clamp and positioning).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/11/13 11:43
L2	1	(heart and retractor and incision and stabilizing and tissue and aperture and suction and coupling and shaft and flexible and clamp and frame and blades).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/11/13 11:45
L3	1	(heart and retractor and incision and stabilizing and tissue and aperture and suction and coupling and shaft and flexible and clamp and suction and port).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/11/13 11:46
L4	0	(heart and retractor and incision and stabilizing and tissue and aperture and suction and coupling and shaft and wire and flexible and clamp and suction).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/11/13 11:52
L5	0	(heart and retractor and incision and stabilizing and tissue and aperture and suction and coupling and shaft and wire and flexible and clamp and beads).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/11/13 11:53
L6	1922	(600/201 600/235 600/206 600/210 600/37).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2009/11/13 12:09
L7	1428	(600/16 600/227 600/228 600/229).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2009/11/13 12:09

L8	2427	retract\$3 and (flex\$4 with clamp\$3) and (table or stable)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/11/13 12:09
L9	178	L8 and heart	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/11/13 12:09
S1	4	((("6013027") or ("6036641") or ("6338712") or ("6338738")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 07:36
S2	730	(600/37).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/06 14:26
S3	472	S2 and (heart or cardiac)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/03/07 07:36
S4	1182	600/16	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/03/07 07:36
S5	897	(600/16).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 07:36
S6	240	(600/201).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 08:10
S7	159	(600/206).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 08:12
S8	324	(600/210).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 08:19
S9	133	(600/227).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 08:21
S10	116	(600/228).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 08:28

S11	100	(600/229).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 08:31
S12	123	(600/231).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 08:33
S13	154	(600/232).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 08:36
S14	232	(600/235).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 08:36
S15	76	("2594086" "2670731" "3998217" "4122844" "4254763" "4421107" "4457300" "4510926" "4865019" "4989587" "5067477" "5127393" "5167223" "5174278" "5231974" "5304183" "5391156" "5441042" "5441059" "5452733" "5503611" "5540648" "5613937" "5728047" "5779629" "5807243" "5882299").PN. OR ("2002/0115911" "5980455" "6030340"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/07 08:49
S16	5723	(heart or cardiac or thora \$3 or chest) same retract \$3	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/07 08:53
S17	3747	S16 and (flex\$4 or deform \$4)	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/07 08:54
S18	2789	S17 and heart	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/07 08:54
S19	1078	S18 and (suction or vac \$3um)	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/07 08:55
S20	769	S19 and incision	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/07 10:01
S21	803	S19 and (inter\$costal or port)	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/07 10:01

S22	185	S21 not S20	US-PGPUB; USPAT; USOCR	OR	ON	2007/03/07 10:07
S23	7	("5980455") or ("20020115911") or ("6030340") or ("20030055410") or ("20030010346") or ("20020022848") or ("7025722")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 13:16
S24	50	("(6447443") or ("6758808") or ("20020095139") or ("20020099268") or ("20020138109") or ("20040171917") or ("20050010079") or ("6414139") or ("6312924") or ("6414149") or ("4481009") or ("4838888") or ("5821343") or ("5876332") or ("5891506") or ("6017741") or ("6335459") or ("5403353") or ("5674253") or ("RE35779") or ("4038990") or ("4416658") or ("5272163") or ("5382598") or ("5397342") or ("5474999") or ("5515850") or ("5545206") or ("5565465") or ("5565477") or ("5567735") or ("5573531") or ("5684198") or ("5755763") or ("5800482") or ("5895417") or ("5908382") or ("5908447") or ("5938680") or ("6002969") or ("6004343") or ("6007538") or ("6010500") or ("6019739") or ("6032077") or	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 12:56

		("6035239") or ("6071274") or ("6076012") or ("6083216") or ("6102853") or (").pn.")). PN.				
S25	1	("20030158463").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/03/07 13:17
S26	1903	(protect\$3 near nerve) or (detent and retract\$3 and heart)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/03/08 13:28
S27	915	(protect\$3 near nerve) or (detent and retract\$3 and heart and nerve)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/03/08 13:28
S28	362	S27 and retract\$3	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/03/08 13:29
S29	203	S28 and heart	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/03/08 13:29
S30	171	S29 and (incision or wound)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/03/08 13:30
S31	53	(US-20030055410-\$ or US- 20040186353-\$ or US- 20030083553-\$ or US- 20020099269-\$ or US- 20010001389-\$ or US- 20040106918-\$ or US- 20030060685-\$ or US- 20020115911-\$ or US- 20010009971-\$ or US- 20020068855-\$ or US- 20040260145-\$ or US- 20030158463-\$ or US- 20030055318-\$ or US- 20030010346-\$ or US- 20030009080-\$ or US- 20030078470-\$ or US- 20030088150-\$ or US- 20020091300-\$ or US- 20020022848-\$ or US- 20030125604-\$ or US- 20030036677-\$ or US- 20040002625-\$ or US- 20020120177-\$ or US-	US-PGPUB; USPAT	OR	OFF	2007/03/08 14:16

		20020082469-\$).did. or (US-6581889-\$ or US-6302843-\$ or US-6030340-\$ or US-6036641-\$ or US-6740029-\$ or US-6767324-\$ or US-6390976-\$ or US-6338738-\$ or US-6338712-\$ or US-6102853-\$ or US-6013027-\$ or US-5980455-\$ or US-5613937-\$ or US-5509890-\$ or US-7056287-\$ or US-7025722-\$ or US-6743170-\$ or US-6375611-\$ or US-6273853-\$ or US-7182731-\$ or US-5452733-\$ or US-RE38814-\$ or US-7048683-\$ or US-6478028-\$ or US-6656109-\$ or US-5782746-\$).did. or (US-6063021-\$ or US-6641604-\$ or US-5976069-\$).did.				
S32	19	S31 and (inflat\$4)	US-PGPUB; USPAT	OR	ON	2007/03/08 14:39
S33	92	((rigidify\$3 or rigid) with suction with flex\$4) and (heart or cardiac)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/08/16 09:22
S34	47	S33 and @ad<"20021206"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/08/16 09:22
S35	2615	(600/37 600/16 600/227 600/228 600/229 600/201 600/235 600/206 600/210). ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/08/16 11:23
S36	2690	(600/37 600/16 600/227 600/228 600/229 600/201 600/235 600/206 600/210). ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/12/07 11:59
S37	101	((rigidify\$3 or rigid) with suction with flex\$4) and (heart or cardiac)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2007/12/07 12:27
S38	6170	(heart or cardiac or thora \$3 or chest) same retract \$3	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 12:27
S39	4085	S38 and (flex\$4 or deform \$4)	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 12:27
S40	3066	S39 and heart	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 12:27

S41	1205	S40 and (suction or vac\$3um)	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 12:27
S42	856	S41 and incision	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 12:27
S43	896	S41 and (inter\$costal or port)	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 12:27
S44	211	S43 not S42	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 12:27
S45	62432	(suction\$3 or vac\$3um) and (heart or cardiac)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/23 07:54
S46	5947	S45 and ball	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/23 07:54
S47	1949	(suction\$3 or vac\$3um) with heart	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/23 07:55
S48	507	S47 and ball	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/23 07:55
S49	303	S48 and @ad<"20021206"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/23 07:55
S50	241	S49 and (flex\$4 or deform\$4)	US-PGPUB; USPAT; USOCR	OR	ON	2008/06/23 07:56
S51	241	S49 and (flex\$4 or deform\$4)	US-PGPUB; USPAT; USOCR	OR	ON	2008/06/23 07:57
S52	171388	(suction\$3 or vac\$3um) with (rigid\$3 or semi\$rigid\$3 or tube or tubing)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/23 10:48
S53	182529	(suction\$3 or vac\$3um) with (rigid\$3 or semi\$rigid\$3 or tube or tubular or tubing)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/23 10:49
S54	207038	(suction\$3 or vac\$3um) with (rigid\$3 or semi\$rigid\$3 or tube or tubular or tubing or flex\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/23 10:50

S55	304	S48 and S54	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/23 10:50
S56	304	S55 and heart	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/23 10:50
S57	183	S56 and @ad<"20021206"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/23 10:50
S58	1949	(suction\$3 or vac\$3um) with heart	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/24 07:34
S59	507	S58 and ball	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/24 07:34
S60	207075	(suction\$3 or vac\$3um) with (rigid\$3 or semi\$rigid \$3 or tube or tubular or tubing or flex\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/24 07:34
S61	304	S59 and S60	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/24 07:34
S62	304	S61 and heart	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/06/24 07:34
S63	183	S62 and @ad<"20021206"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 07:34
S64	931	heart and ball and suction and flexible and (rigid or rigidify\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 08:19
S65	1605	heart and ball and (suction or vac\$2um) and flexible and (rigid or rigidify\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 08:20
S66	229	heart and ball and ((suction or vac\$2um) with flexible and (rigid or rigidify \$3))	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 08:21

S67	57	(US-20030055410-\$ or US-20020115911-\$ or US-20030060685-\$ or US-20040002625-\$ or US-20040260145-\$ or US-20020091300-\$ or US-20040106918-\$ or US-20030158463-\$ or US-20030083553-\$ or US-20030055318-\$ or US-20030010346-\$ or US-20020022848-\$ or US-20020068855-\$ or US-20030125604-\$ or US-20040186353-\$ or US-20020082469-\$ or US-20020120177-\$ or US-20010001389-\$ or US-20010009971-\$ or US-20030036677-\$ or US-20030009080-\$ or US-20030078470-\$ or US-20020099269-\$ or US-20030088150-\$ or US-20040002632-\$ or US-20030139645-\$).did. or (US-20020111537-\$ or US-20010041827-\$).did. or (US-5980455-\$ or US-5782746-\$ or US-6767324-\$ or US-6036641-\$ or US-5452733-\$ or US-5613937-\$ or US-6375611-\$ or US-7056287-\$ or US-5509890-\$ or US-7182731-\$ or US-6740029-\$ or US-7025722-\$ or US-6581889-\$ or US-6478028-\$ or US-6641604-\$ or US-6063021-\$ or US-RE38814-\$ or US-5976069-\$ or US-6302843-\$ or US-6656109-\$ or US-6013027-\$ or US-6102853-\$ or US-6273853-\$ or US-6338738-\$ or US-6338712-\$ or US-6743170-\$).did. or (US-6030340-\$ or US-6390976-\$ or US-7048683-\$).did.	US-PGPUB; USPAT	OR	OFF	2008/06/24 08:21
S68	213	S66 not S67	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 08:22

S69	96	S68 and @ad<"20021206"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 08:23
S70	44	S69 not S63	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 08:23
S71	52	S69 not S70	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 08:28
S72	121	"5865730"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 08:56
S73	1	("5865730").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 08:56
S74	1	("6589166").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 09:29
S75	2115	(600/37 600/16 600/227 600/228 600/229).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 11:17
S76	823	(600/201 600/235 600/206 600/210).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 11:17
S77	1684	(600/201 600/235 600/206 600/210 600/37).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 11:18
S78	1331	(600/16 600/227 600/228 600/229).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 11:18
S79	1684	(600/201 600/235 600/206 600/210 600/37).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/06/24 11:19

S80	58	(US-20030055410-\$ or US-20020115911-\$ or US-20030060685-\$ or US-20040002625-\$ or US-20040260145-\$ or US-20020091300-\$ or US-20040106918-\$ or US-20030158463-\$ or US-20030083553-\$ or US-20030055318-\$ or US-20030010346-\$ or US-20020022848-\$ or US-20020068855-\$ or US-20030125604-\$ or US-20040186353-\$ or US-20020082469-\$ or US-20020120177-\$ or US-20010001389-\$ or US-20010009971-\$ or US-20030036677-\$ or US-20030009080-\$ or US-20030078470-\$ or US-20020099269-\$ or US-20030088150-\$ or US-20040002632-\$ or US-20030139645-\$).did. or (US-20020111537-\$ or US-20010041827-\$).did. or (US-5980455-\$ or US-5782746-\$ or US-6767324-\$ or US-6036641-\$ or US-5452733-\$ or US-5613937-\$ or US-6375611-\$ or US-7056287-\$ or US-5509890-\$ or US-7182731-\$ or US-6740029-\$ or US-7025722-\$ or US-6581889-\$ or US-6478028-\$ or US-6641604-\$ or US-6063021-\$ or US-RE38814-\$ or US-5976069-\$ or US-6302843-\$ or US-6656109-\$ or US-6013027-\$ or US-6102853-\$ or US-6273853-\$ or US-6338738-\$ or US-6338712-\$ or US-6743170-\$).did. or (US-6030340-\$ or US-6390976-\$ or US-7048683-\$ or US-5865730-\$).did.	US-PGPUB; USPAT	OR	OFF	2008/11/02 16:11
S81	56	S80 and (suction\$3 or vac\$3um or rigid\$3 or semi\$rigid\$3 or semi\$flex\$4 or flex\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/02 16:13

S82	58	(US-20030055410-\$ or US-20020115911-\$ or US-20030060685-\$ or US-20040002625-\$ or US-20040260145-\$ or US-20020091300-\$ or US-20040106918-\$ or US-20030158463-\$ or US-20030083553-\$ or US-20030055318-\$ or US-20030010346-\$ or US-20020022848-\$ or US-20020068855-\$ or US-20030125604-\$ or US-20040186353-\$ or US-20020082469-\$ or US-20020120177-\$ or US-20010001389-\$ or US-20010009971-\$ or US-20030036677-\$ or US-20030009080-\$ or US-20030078470-\$ or US-20020099269-\$ or US-20030088150-\$ or US-20040002632-\$ or US-20030139645-\$).did. or (US-20020111537-\$ or US-20010041827-\$).did. or (US-5980455-\$ or US-5782746-\$ or US-6767324-\$ or US-6036641-\$ or US-5452733-\$ or US-5613937-\$ or US-6375611-\$ or US-7056287-\$ or US-5509890-\$ or US-7182731-\$ or US-6740029-\$ or US-7025722-\$ or US-6581889-\$ or US-6478028-\$ or US-6641604-\$ or US-6063021-\$ or US-RE38814-\$ or US-5976069-\$ or US-6302843-\$ or US-6656109-\$ or US-6013027-\$ or US-6102853-\$ or US-6273853-\$ or US-6338738-\$ or US-6338712-\$ or US-6743170-\$).did. or (US-6030340-\$ or US-6390976-\$ or US-7048683-\$ or US-5865730-\$).did.	US-PGPUB; USPAT	OR	OFF	2008/11/03 07:02
S83	56	S82 and (suction\$3 or vac\$3um or rigid\$3 or semi\$rigid\$3 or semi\$flex\$4 or flex\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/03 07:02

S84	56	S82 and (suction\$3 or vac \$3um or rigid\$3 or semi \$rigid\$3 or semi\$flex\$4 or flex\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/03 07:36
S85	58	(US-20030055410-\$ or US- 20020115911-\$ or US- 20030060685-\$ or US- 20040002625-\$ or US- 20040260145-\$ or US- 20020091300-\$ or US- 20040106918-\$ or US- 20030158463-\$ or US- 20030083553-\$ or US- 20030055318-\$ or US- 20030010346-\$ or US- 20020022848-\$ or US- 20020068855-\$ or US- 20030125604-\$ or US- 20040186353-\$ or US- 20020082469-\$ or US- 20020120177-\$ or US- 20010001389-\$ or US- 20010009971-\$ or US- 20030036677-\$ or US- 20030009080-\$ or US- 20030078470-\$ or US- 20020099269-\$ or US- 20030088150-\$ or US- 20040002632-\$ or US- 20030139645-\$).did. or (US-20020111537-\$ or US- 20010041827-\$).did. or (US-5980455-\$ or US- 5782746-\$ or US-6767324- \$ or US-6036641-\$ or US- 5452733-\$ or US-5613937- \$ or US-6375611-\$ or US- 7056287-\$ or US-5509890- \$ or US-7182731-\$ or US- 6740029-\$ or US-7025722- \$ or US-6581889-\$ or US- 6478028-\$ or US-6641604- \$ or US-6063021-\$ or US- RE38814-\$ or US-5976069- \$ or US-6302843-\$ or US- 6656109-\$ or US-6013027- \$ or US-6102853-\$ or US- 6273853-\$ or US-6338738- \$ or US-6338712-\$ or US- 6743170-\$).did. or (US- 6030340-\$ or US-6390976- \$ or US-7048683-\$ or US- 5865730-\$).did.	US-PGPUB; USPAT	OR	OFF	2008/11/03 15:44

S86	56	S85 and (suction\$3 or vac \$3um or rigid\$3 or semi \$rigid\$3 or semi\$flex\$4 or flex\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/03 15:44
S87	58	(US-20030055410-\$ or US- 20020115911-\$ or US- 20030060685-\$ or US- 20040002625-\$ or US- 20040260145-\$ or US- 20020091300-\$ or US- 20040106918-\$ or US- 20030158463-\$ or US- 20030083553-\$ or US- 20030055318-\$ or US- 20030010346-\$ or US- 20020022848-\$ or US- 20020068855-\$ or US- 20030125604-\$ or US- 20040186353-\$ or US- 20020082469-\$ or US- 20020120177-\$ or US- 20010001389-\$ or US- 20010009971-\$ or US- 20030036677-\$ or US- 20030009080-\$ or US- 20030078470-\$ or US- 20020099269-\$ or US- 20030088150-\$ or US- 20040002632-\$ or US- 20030139645-\$).did. or (US-20020111537-\$ or US- 20010041827-\$).did. or (US-5980455-\$ or US- 5782746-\$ or US-6767324- \$ or US-6036641-\$ or US- 5452733-\$ or US-5613937- \$ or US-6375611-\$ or US- 7056287-\$ or US-5509890- \$ or US-7182731-\$ or US- 6740029-\$ or US-7025722- \$ or US-6581889-\$ or US- 6478028-\$ or US-6641604- \$ or US-6063021-\$ or US- RE38814-\$ or US-5976069- \$ or US-6302843-\$ or US- 6656109-\$ or US-6013027- \$ or US-6102853-\$ or US- 6273853-\$ or US-6338738- \$ or US-6338712-\$ or US- 6743170-\$).did. or (US- 6030340-\$ or US-6390976- \$ or US-7048683-\$ or US- 5865730-\$).did.	US-PGPUB; USPAT	OR	OFF	2008/11/04 11:57

S89	30	S87 and (spring or spring \$like or coil\$2) and (ball or socket or collet)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/04 11:58
S90	58	(US-20030055410-\$ or US-20020115911-\$ or US-20030060685-\$ or US-20040002625-\$ or US-20040260145-\$ or US-20020091300-\$ or US-20040106918-\$ or US-20030158463-\$ or US-20030083553-\$ or US-20030055318-\$ or US-20030010346-\$ or US-20020022848-\$ or US-20020068855-\$ or US-20030125604-\$ or US-20040186353-\$ or US-20020082469-\$ or US-20020120177-\$ or US-20010001389-\$ or US-20010009971-\$ or US-20030036677-\$ or US-20030009080-\$ or US-20030078470-\$ or US-20020099269-\$ or US-20030088150-\$ or US-20040002632-\$ or US-20030139645-\$).did. or (US-20020111537-\$ or US-20010041827-\$).did. or (US-5980455-\$ or US-5782746-\$ or US-6767324-\$ or US-6036641-\$ or US-5452733-\$ or US-5613937-\$ or US-6375611-\$ or US-7056287-\$ or US-5509890-\$ or US-7182731-\$ or US-6740029-\$ or US-7025722-\$ or US-6581889-\$ or US-6478028-\$ or US-6641604-\$ or US-6063021-\$ or US-RE38814-\$ or US-5976069-\$ or US-6302843-\$ or US-6656109-\$ or US-6013027-\$ or US-6102853-\$ or US-6273853-\$ or US-6338738-\$ or US-6338712-\$ or US-6743170-\$).did. or (US-6030340-\$ or US-6390976-\$ or US-7048683-\$ or US-5865730-\$).did.	US-PGPUB; USPAT	OR	OFF	2008/11/05 07:18

S91	1349	(600/16 600/227 600/228 600/229).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/11/05 10:59
S92	1037	S91 and (suction or pressure or vac\$3um)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/11/05 11:00
S93	715	S92 and (wire or cable or tension\$3 or filament)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 11:00
S94	478	S93 and (lock\$3 or rigid or rigidify\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 11:01
S95	465	S94 not S90	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 11:01
S96	281	S95 and @ad<"20021206"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/11/05 11:01
S97	177	S96 and (retract\$3 or spread\$3 or rib)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 11:02
S98	153	S97 and (heart or atrial or atrium or ventric\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 11:02
S99	90	S98 and (retract\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 11:03
S100	1734	(600/201 600/235 600/206 600/210 600/37).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/11/05 12:13
S101	1275	S100 and (suction or pressure or vac\$3um)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/11/05 12:14
S102	986	S101 and (wire or cable or tension\$3 or filament)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 12:14

S103	746	S102 and (lock\$3 or rigid or rigidify\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 12:14
S104	712	S103 not S90	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 12:15
S105	365	S104 and @ad< "20021206"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/11/05 12:15
S107	332	S105 not S99	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2008/11/05 12:15
S108	218	S107 and (heart or atrial or atrium or ventric\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 12:15
S109	141	S108 and (retract\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2008/11/05 12:16
S110	1835	(600/201 600/235 600/206 600/210 600/37).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2009/05/13 07:20
S111	1395	(600/16 600/227 600/228 600/229).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2009/05/13 07:21
S112	1	((heart and retractor and incision and suction and coupling and shaft and flexible and (rigidify\$3 or rigid) and clamp)).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2009/05/13 07:31
S113	2	((heart and retract\$3 and incision and suction\$3 and coupl\$3 and shaft and flexible and (rigidify\$3 or rigid) and clamp\$3)).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2009/08/12 15:18
S114	2	((heart and retract\$3 and incision and suction\$3 and coupl\$3 and shaft and flexible and (rigidify\$3 or rigid) and clamp\$3)).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/12 15:18

S115	62	(US-20030055410-\$ or US-20020115911-\$ or US-20030060685-\$ or US-20040002625-\$ or US-20040260145-\$ or US-20020091300-\$ or US-20040106918-\$ or US-20030158463-\$ or US-20030083553-\$ or US-20030055318-\$ or US-20030010346-\$ or US-20020022848-\$ or US-20020068855-\$ or US-20030125604-\$ or US-20040186353-\$ or US-20020082469-\$ or US-20020120177-\$ or US-20010001389-\$ or US-20010009971-\$ or US-20030036677-\$ or US-20030009080-\$ or US-20030078470-\$ or US-20020099269-\$ or US-20030088150-\$ or US-20040002632-\$ or US-20030139645-\$).did. or (US-20020111537-\$ or US-20010041827-\$ or US-20020095139-\$).did. or (US-5980455-\$ or US-5782746-\$ or US-6767324-\$ or US-6036641-\$ or US-5452733-\$ or US-5613937-\$ or US-6375611-\$ or US-7056287-\$ or US-5509890-\$ or US-7182731-\$ or US-6740029-\$ or US-7025722-\$ or US-6581889-\$ or US-6478028-\$ or US-6641604-\$ or US-6063021-\$ or US-RE38814-\$ or US-5976069-\$ or US-6302843-\$ or US-6656109-\$ or US-6013027-\$ or US-6102853-\$ or US-6273853-\$ or US-6338738-\$ or US-6338712-\$ or US-6743170-\$).did. or (US-6030340-\$ or US-6390976-\$ or US-7048683-\$ or US-5865730-\$ or US-6994669-\$ or US-6758809-\$ or US-7338434-\$).did.	US-PGPUB; USPAT	OR	OFF	2009/08/13 10:32
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S116	0	S115 and retract\$3 and (flex\$4 with clamp with table)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/13 10:33
S117	0	S115 and retract\$3 and (flex\$4 with clamp with stable)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/13 10:33
S118	0	S115 and retract\$3 and (flex\$4 with clamp\$3 with stable)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/13 10:33
S119	0	S115 and retract\$3 and (flex\$4 same clamp\$3 same stable)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/13 10:33
S120	1	S115 and retract\$3 and (flex\$4 same clamp\$3 same table)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/13 10:33
S121	141	retract\$3 and (flex\$4 with clamp\$3 with table)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/13 10:47
S122	3	S121 and heart	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/13 10:47
S123	4	S121 and chest	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/13 10:48
S124	2393	retract\$3 and (flex\$4 with clamp\$3) and (table or stable)	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/13 10:50
S125	169	S124 and heart	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2009/08/13 10:50
S126	72	S125 and @ad<"20021206"	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2009/08/13 10:50
S127	1877	(600/201 600/235 600/206 600/210 600/37).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2009/08/13 13:19

S128	1410	(600/16 600/227 600/228 600/229).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2009/08/13 13:22
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